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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/25/2005

Toru Okabe

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EXAMINER

ZHU, WEIPING

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

11/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,036	Applicant(s) OKABE ET AL.	
	Examiner WEIPING ZHU	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) 12-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,8-11 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/31/2008 and 7/31/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 1-4, 6, 8-11 and 16-20 are currently under examination, wherein claims 1, 4, 9, 10 and 17 have been amended and claims 19 and 20 have been newly added in applicant's amendment filed on September 12, 2008.

Status of Previous Rejections

2. The previous rejections of claims 1-4, 6, 8-11 and 16-18 under 35 U.S.C. 103(a) as stated in the Office action dated August 25, 2008 are maintained

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 6, 8-11 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Löffelholz et al. (US 6,136,062) in view of Takahar et al. (US 5,417,917) and further in view of Kamei et al. (US 6,015,527)

Claims 1-3, 6, 8-11 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Löffelholz et al. ('062) in view of Takahar et al. ('917) and further in view of Kamei et al. ('527) as stated in the Office action dated August 25, 2008.

With respect to the newly added feature of the separation step in claim 1, Löffelholz et al. ('062) discloses that the reduction product is freed from alkaline

Art Unit: 1793

earth oxides and /or rare earth oxides formed in the reduction and from excess alkaline earth metal and/or rare earth metal by acid washing (col. 1, lines 42-47).

With respect to the amended feature in the reducing step in claim 1, Löffelholz et al. ('062) in view of Takahar et al. ('917) and further in view of Kamei et al. ('527) does not disclose the manner of the arrangement of the metal compound compacts as claimed. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the compacts in the claimed manner in order to reduce the compacts of Löffelholz et al. ('062) in view of Takahar et al. ('917) and further in view of Kamei et al. ('527) by a vaporized active metal effectively and uniformly. The extent of the shape change of the compacts of Löffelholz et al. ('062) in view of Takahar et al. ('917) and further in view of Kamei et al. ('527) before and after the reducing step would be substantially identical to the claimed extent, because both the products and the processes of Löffelholz et al. ('062) in view of Takahar et al. ('917) and further in view of Kamei et al. ('527) and the instant application are substantially identical. See MPEP 2112.01.

With respect to the amended feature in claim 9, Löffelholz et al. ('062) discloses that the reducing temperature is between 750 and 850° C (col. 1, lines 49-59), which overlaps the claimed reducing temperature range, a prima facie case of obviousness exists, MPEP 2144.05 I.

With respect to the amended feature in claim 10, Takahar et al. ('917) discloses the mixture is molded to a shape of 70 mm in diameter and about 2

Art Unit: 1793

mm thick (col. 1, lines 48-50), which overlaps the claimed distance range, a prima facie case of obviousness exists, MPEP 2144.05 I.

With respect to the amended feature in claim 17, the ground of rejection of claim 17 based on MPEP 2144.05 II as stated in the Office action dated August 25, 2008 is applied properly herein.

With respect to the new claim 19, Takahar et al. ('917) discloses that the mixing ratio of metal compound in the metal compound compact is not less than 10% by weight (col. 3, lines 46-51).

With respect to the new claim 20, Löffelholz et al. ('062) discloses that 480 g of Mg melt is mixed with 350 g of the metal compound to reduce the metal compound (Example 1, Table 1), which reads on the claim limitation.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Löffelholz et al. ('062) in view of Takahar et al. ('917) and further in view of Kamei et al. ('527) as applied to claim 1 above and further in view of Honma et al. (US 3,839,020) as stated in the Office action dated August 25, 2008.

With respect to the amended feature in claim 4, it does not change the scope of the claim. The reason for the rejection of claim 4 as stated in the Office action dated August 25, 2008 is applied properly herein.

Response to Arguments

5. The applicant's arguments filed on September 12, 2008 have been fully considered but they are not persuasive.

First, the applicant argues that the references relied upon by the examiner for the rejections of the instant claims have not recognized the advantages

Art Unit: 1793

offered with the use of the instant process as claimed. In response, the examiner notes that the process as disclosed by the references is substantially identical to the claimed process, therefore, renders the claimed process obvious to one of ordinary skill in the art. The references do not have to recognize the advantages offered with the use of the instant process as claimed. These advantages would obviously be offered by the process as disclosed by the references.

Second, the applicant argues that neither Takahar et al. ('917) nor Kamei et al. ('527) teaches the reduction of heavy metal oxides. In response, the examiner notes the ground of the rejection of the claim limitation of the reduction of heavy metal oxides relies on the teaching of Löffelholz et al. ('062) rather than Takahar et al. ('917) or Kamei et al. ('527).

Third, the applicant argues that the powdery solid reductants disclosed by Kamei et al. ('527) are entirely different from the claimed reaction agents. In response, see the response to the fifth argument in the Office action dated August 25, 2008.

Fourth, the applicant argues that the reducing agents of Löffelholz et al. ('062) cannot simply be replaced by their corresponding oxides. In response, the examiner notes that the examiner's statement that it would have been obvious to one of ordinary skill in the art to use a compound (e.g. an oxide) of an active metal select from calcium and magnesium as the reaction agent as disclosed by Kamei et al. ('527) in the Office action dated August 25, 2008 means Kamei et al. ('527) discloses that lime (i.e. calcium oxide) can be beneficially added in addition to the powdery solid reductant (col. 3, lines 29-65).

Art Unit: 1793

Fifth, the applicant argues that examiner's statement that It would have been obvious to one of ordinary skill in the art at the time the invention was made to mix a metal compound, a reaction agent and a binder together for molding as disclosed by Kamei et al. ('527) in the process of Löffelholz et al. ('062) in view of Takahar et al. ('917) in the Office action dated August 25, 2008 is improper, because the reduction reaction could not be controlled in the manner alleged by the examiner and also that a metal powder having the desired size could not be obtained thereby. In response, the examiner notes that as discussed in the paragraph 3 above, the compacts of Löffelholz et al. ('062) in view of Takahar et al. ('917) and further in view of Kamei et al. ('527) would be reduced by contacting vaporized active metals. As discussed in the response to applicant's fourth argument above, Kamei et al. ('527) discloses that calcium oxide could also be used as a reaction agent, which would be mixed with a metal compound, and a binder for molding.

Sixth, the applicant argues that none of the references satisfies the claimed feature of the instant process. In response, the examiner notes that the combination of Löffelholz et al. ('062) in view of Takahar et al. ('917) and further in view of Kamei et al. ('527) with proper motivations as stated in the Office action dated August 25, 2008 renders the claimed feature of the instant process obvious to one of ordinary skill in the art.

Seventh, the applicant argues that the claimed feature of the reducing temperature range in the amended claim 9 is not recognized by the cited

Art Unit: 1793

references. In response, see the reason for the rejection of the amended claim 9 in the paragraph 3 above.

Eighth, the applicant argues that Honma et al. ('020) does not cure the deficiencies of Löffelholz et al. ('062) in view of Takahar et al. ('917) and further in view of Kamei et al. ('527) in meeting the claimed process limitations. In response, see the response to applicant's arguments above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is

Art Unit: 1793

571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

WZ

11/10/2008

<div><div><i>Application Number</i></div><div></div></div>	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/517,036	OKABE ET AL.	
	Examiner	Art Unit	
	WEIPING ZHU	1793	